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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,930	03/23/2004	Craig Ogawa	CN1-004US	5139

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EXAMINER	
NGUYEN, ANH NGOC M	

ART UNIT	PAPER NUMBER
4181	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/807,930	OGAWA ET AL.	
	Examiner	Art Unit	
	Anh Ngoc Nguyen	4181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. *> IPXL Holdings v. Amazon. COM, Inc., 430 F.2d 1377, 1384, 77 USPQ2d 1140, 1145 (Fed. Cir. 2005);< Ex parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990) *>(< claim directed to an automatic transmission work stand and the method * of using it * held ** ambiguous and properly rejected under 35 U.S.C. 112, second paragraph>)<. Such claims *>may< also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps with different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only.

2. Claims 1 - 8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 is directed to two statutory classes of invention, i.e. an apparatus and an article of manufacture, namely, a program code. Thus the claim is non-statutory.

Claims 1 - 8 lack the proper form for a claim directed to computer/machine readable instructions.

To be statutory claims directed to computer/machine readable instructions must be embodied on a computer readable medium encoded with a process or data structure usable by a

computer. A Machine-readable medium is not acceptable. For the claim to be statutory the preamble of the claim must define a structural and functional interrelationship between the process or data structure and computer software and hardware components. As a result, the preamble of the claim must define a process or data structure as a computer readable medium embodying the process or data structure. Further, the computer readable medium cannot be any type of signal as defined by the specification or claim itself.

Examples of acceptable language in computer-processing related claims :

1. "computer readable medium" encoded with ___(Options Below)___
   [a] "a computer program"
   [b] "software"
   [c] "computer executable instructions"
   [d] "instructions capable of being executed by a computer"

2. "a computer readable medium" __(Options below)_____ "computer program"
   [a] storing a
   [b] embodied with a
   [c] encoded with a
   [d] having a stored
   [e] having an encoded

A computer-readable program code is not acceptable. The examiner suggests changing computer readable code to a processor executing program code associated to the system controller.

Correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 9, 10, 12 - 18, and 20 - 22 are rejected under 35 U.S.C. 102 (b) as being anticipated by Virgile (5,608,726).

Consider claim 9, Virgile discloses a building automation system comprising: a local area network (see col. 1 lines 45 – 50, where Virgile discusses local area networks). Virgile discloses a subnetwork for connecting at least one automation device (see Fig. 3 and col. 6 lines 55 - 67, where Virgile discusses the network segment L100 includes a number of hosts or computers therefore automation devices). Virgile discloses a first bridge connecting the subnetwork to the local area network, a second bridge connecting the subnetwork to the local area network (see Fig. 1 and col. 1 lines 43 – 48, where Virgile discusses bridges of the subnetworks therefore there is a first bridge, a second bridge, etc). Virgile discloses wherein at least one of the bridges connects the subnetwork to the local area network even if the other bridge is offline (see Fig.1, where Virgile the bridge isolates the two network segments so that they operate independently therefore one bridge can still function if the other bridge is offline).

Consider claim 10, Virgile discloses at least one of the bridges is communicatively coupled to at least one automation device even if the subnetwork includes a break (see col. 8 lines 25 – 36, lines 43 – 47 and lines 61 – 67, where Virgile discusses the processor receives packets from hosts).

Consider claim 12, Virgile discloses the local area network is an Ethernet network (see col. 1 lines 64 – 67 and col. 2 lines 50 – 54, where Virgile discusses an Ethernet LAN).

Consider claim 13, Virgile discloses further comprising a plurality of subnetworks connected to the local area network by a plurality of bridges (see Fig. 1, col. 1 lines 26 – 32 lines 43 – 50, where Virgile discusses a campus network with many bridges for connecting subnetworks).

Consider claim 14, Virgile discloses a method comprising: connecting a bridge to a local area network (see col. 1 lines 45 – 48 and col. 5 lines 34 - 36, where Virgile discusses each bridge is connected to LANs). Virgile discloses connecting the bridge to a subnetwork (see col. 1 lines 43 – 45, where Virgile discusses bridges b1 and b2 of the subnetwork A). Virgile discloses receiving configuration information at the bridge via the local area network (see col. 7 lines 60 – 67 and col. 8 lines 9 – 12, where Virgile discusses a table that includes a list of the hosts and for storing indication of I/O interfaces). Virgile discloses configuring an automation device in the subnetwork based on the configuration information received at the bridge (see col. col. 8 lines 63 – 67, col. 9 lines 1 – 13 lines 20 – 23 lines 40 – 58, where Virgile discusses if a host wishes to join a multicast group it is assigned a multicast destination address).

Consider claim 15, Virgile discloses assigning a dynamic address to the automation device in the subnetwork (see col. 9 lines 40 – 50, where Virgile discusses the processor writes the multicast destination address for the group if a host is the first host in the subnetwork).

Consider claim 16, Virgile discloses receiving updated configuration information via the local area network for the automation device in the subnetwork (see col. 7 lines 60 – 67 and col. 8 lines 9 – 12, where Virgile discusses a table that includes a list of the hosts and for storing indication of I/O interfaces).

Consider claim 17, Virgile discloses maintaining a map of automation devices in the subnetwork (see col. 7 lines 45 – 67, where Virgile discusses a forwarding table with entries and I/O interfaces).

Consider claim 18, Virgile discloses automatically updating a map of automation devices in the subnetwork if an automation device is added to the subnetwork (see Fig. 4, Fig. 5, col. 7 lines 60 – 67, and col. 8 lines 1 – 12 lines 25 – 47, where Virgile discusses a list field for storing a list of the hosts which are members of the multicast group).

Consider claim 20, Virgile discloses resetting a device in the subnetwork (see col. 10 lines 30 – 34, where Virgile discusses the turning on and off of hosts).

Consider claim 21, Virgile discloses isolation of a fault in the subnetwork (see col. 2 lines 45 – 50, where Virgile discusses isolating the two network segments so that they operate as independent collision domains).

Consider claim 22, Virgile discloses automatic rerouting of subnetwork traffic if a subnetwork fails (see Fig. 1, col. 1 lines 43 – 50, col. 2 lines 43 – 67 and col. 3 lines 1 - 3, where Virgile discusses control packets are sent between bridges to determine the best route for reaching each host).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 4 – 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grube et al (5,835,485) in view of Filgate (6,292,488).

Consider claim 1, Grube discloses a bridge apparatus for a building automation system comprising: a first network controller operatively associated with the network (see col. 4 lines 4 – 10 lines 22 – 25, where Grube discusses a plurality of network nodes and a controller at any network node); the first network controller connecting the bridge to a local area network (see Fig. 2 and col. 4 lines 23 – 25 lines 50 – 67, where Grube discusses each subnetwork includes at least one controller at any network node therefore a first controller, a second controller, etc), a second network controller operatively associated with the network (see col. 4 lines 4 – 10 lines 22 – 25, where Grube discusses a plurality of network nodes and a controller at any network node); the second network controller connecting the bridge to a subnetwork (see Fig. 2 and col. 4 lines 23 – 25 lines 50 – 67, where Grube discusses each subnetwork includes at least one controller at any network node therefore a first controller, a second controller, etc).

Grube does not specifically disclose computer readable program code and a system controller. Filgate discloses a system controller (see Fig. 1, col. 2 lines 20 – 25 and col. 3 lines 27 - 33, where Filgate discusses the intiator taking control of the local bridge). Filgate discloses computer-readable program code provided in computer-readable storage operatively associated with the system controller (see Fig. 3 and col. 7 lines 19 – 21 lines 33 – 34, where Filgate discusses software instructions stored in ROM), the computer-readable program code including: program code for receiving configuration information via the local data bus (see Fig. 3, col. 4 lines 10 – 15 and col. 7 lines 36 – 38, where Filgate discusses software languages such as assembly level language and C++); and program code for configuring an automation device

connected to the subnetwork based on the configuration information (see col. 4 lines 10 – 15 lines 33 – 47 and col. 5 lines 35 - 40, where Filgate discusses a deadlock recovery mechanism is embedded within each bridge to facilitate and control recovery of the system).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the invention of Grube, and use computer readable program code in a bridge, as taught by Filgate, thus allowing computer devices to communicate across data links without expending significant resources for providing link monitoring, as discussed by Filgate (see col. 2 lines 55 - 58).

Consider claim 2, Grube discloses the computer-readable program code further includes program code for assigning a dynamic address to the automation device in the subnetwork (see col. 5 lines 22 – 27, where Grube discusses assigning temporary address by the controller).

Consider claim 4, Grube discloses the computer-readable program code further includes program code for maintaining a map of automation devices in the subnetwork (see col. 5 lines 9 – 12, where Grube discusses maintaining internal tables of the bridge).

Consider claim 5, Grube discloses the computer-readable program code further includes program code for automatically updating the map if an automation device is added to the subnetwork (see col. 5 lines 59 – 61, where Grube discusses the internal tables in the bridges can be updated).

Consider claim 6, Filgate discloses the computer-readable program code further includes program code for operating automation devices in a vacation mode (see abstract and col. 5 lines 28 - 29, where Filgate discusses the recovery mechanisms cause the bridges to become idle).

Consider claim 8, Filgate discloses the computer-readable program code further includes program code for resetting a device in the subnetwork (see col. 4 lines 33 – 38, where Filgate discusses the deadlock recovery mechanism within each bridge uses its own unique time delay to control recovery of the system).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grube et al (5,835,485) in view of Filgate (6,292,488) and further in view of Hendrickson et al (5,933,646).

Consider claim 3, Grube and Filgate do not specifically disclose the computer-readable program code further includes program code for receiving updated configuration information via the local area network for the automation device in the subnetwork. Hendrickson discloses the computer-readable program code further includes program code for receiving updated configuration information via the local area network for the automation device in the subnetwork (see col. 2 lines 61 – 67, where Hendrickson discusses updating the configuration database to reflect changes).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the invention of Grube and Filgate, and update configuration information as taught by Hendrickson, thus providing a computer operating system in which environment configuration and management is efficient, consistent and easy to understand, as discussed by Hendrickson (see col. 2 lines 14 - 17).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grube et al (5,835,485) in view of Filgate (6,292,488) and further in view of Craig et al (US 6,266,809).

Consider claim 7, Grube and Filgate do not specifically disclose the computer-readable program code further includes program code for updating firmware at the device in the

subnetwork. Craig discloses the computer-readable program code further includes program code for updating firmware at the device in the subnetwork (see abstract and col. 2 lines 39 – 67, where Craig discusses updating the firmware in a network computer).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the invention of Grube and Filgate, and update firmware as taught by Craig, thus provide for updating the firmware of a network computer without the need for a floppy drive or other portable storage media, as discussed by Craig (see col. 2 lines 14 - 17).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Virgile (5,608,726) in view of Marbach et al (US 6,654,355).

Consider claim 11, Virgile does not specifically disclose the building automation network of claim 9, wherein the subnetwork is a CAN bus. Marbach discloses the building automation network of claim 9, wherein the subnetwork is a CAN bus (see Fig. 1 and col. 1 lines 33 – 36, where Marbach discusses a CAN bus).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the invention of Virgile, and use a CAN bus, as taught by Marbach, thus monitoring a CAN-type network and also diagnosing problems for the CAN-type network, as discussed by Marbach (see col. 2 lines 31 - 34).

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Virgile (5,608,726) in view of Filgate (US 6,292,488).

Consider claim 19, Virgile does not specifically disclose operating automation devices in a vacation mode. Filgate discloses operating automation devices in a vacation mode (see Fig. 1

and col. 3 lines 25 – 30, where Filgate discusses the initiator in idle mode therefore a computer/automation device in idle mode).

It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the invention of Virgile, and operate in vacation mode, as taught by Filgate, thus allowing computer devices to communicate across data links without expending significant resources for providing link monitoring, as discussed by Filgate (see col. 2 lines 55 - 58).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Koch et al (4,737,953) discloses a bridge for connecting local area networks and for receiving a message frame from the network. Marshall (5,027,350) discloses bridges are employed to routes data packets between local area networks. Vasko et al (US 7,107,358) discloses a bridge for an industrial control system using data manipulation technique. Du (US 6,650,648) discloses a LAN with a plurality of subnetworks and a plurality of bridge terminals for transmitting data. Bodmer et al (US 6,263,260) discloses a home and building automation system. Upender et al (5,854,454) discloses utilizing of the standard CAN hardware and CAN protocol to provide message routing in hierarchial, multi-layered bus systems. Perlman (5,844,902) discloses assigning bridges to n LANs.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Ngoc Nguyen whose telephone number is 5712705139. The examiner can normally be reached from 8AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on 5712727876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anh Ngoc Nguyen